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[54] **DIFFERENTIAL COMPARATOR FOR AMPLIFYING SMALL SWING SIGNALS TO A FULL SWING OUTPUT**

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#### Related U.S. Patent Documents

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[52] U.S. Cl. .... **327/65; 327/77; 327/89; 327/374**  
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#### [57] ABSTRACT

A differential comparator that amplifies small swing signals to full swing signals. The differential comparator comprises a current switch having a pair of inputs coupled to receive a pair of small swing complementary input signals and a pair of complementary outputs that output complementary signals. The complementary signals output by the current switch have a voltage swing that centers about a predetermined voltage in response to the complementary input signals. The differential comparator further comprises first and second inverters coupled to receive the output complementary signals, wherein each inverter has a trip point voltage [equal] corresponding to the predetermined voltage. The first and second inverters output full swing complementary output signals in response to the complementary signals output by the current switch.

20 Claims, 3 Drawing Sheets

